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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/799,234	03/12/2004	Trent A. Shidaker	WUR 50656/USw/2	7528

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HUNTSMAN INTERNATIONAL LLC  
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EXAMINER
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SERGEANT, RABON A

ART UNIT	PAPER NUMBER
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1765

NOTIFICATION DATE	DELIVERY MODE
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12/22/2010

ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/799,234	SHIDAKER ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Rabon Sergent	1765	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 23 September 2010.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1,3-7,9,11,14-16 and 20-22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,3-7,9,11,14-16 and 20-22 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

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1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on September 23, 2010 has been entered.

2. Claim 20 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Despite applicants' response, adequate support has not been found for the subject matter of claim 20. Applicants have directed the examiner to paragraph [0051] of U.S. 2004/0171784 A1; however, it is unclear how "essentially free" provides support for "free" within the claim, in view of the fact that "essentially free" has not been defined. Furthermore, while the passage within paragraph [0051] is directed to describing the unit content of the poly(dimethylsiloxane) surfactant; it is not seen that the paragraph provides support for stating that the reaction system, itself, is free of the specifically claimed surfactant.

3. Claim 21 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Initially, it is noted that it is the examiner's position that the claim is not considered to exclude other surfactants, in view of the "comprising" language within line 1 of the claim.

However, applicants have stated that the surfactant is limited to the recited surfactant. This

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position and the associated claim language render applicants' claim indefinite, because fatty acids are also recognized as being surfactants; therefore, it is unclear how to interpret the metes and bounds of the claim. This position is supported by the definition of the terms; surfactant, surface-active agent, and wetting agent; within Sax et al.

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 1, 3-7, 9, 11, 14-16, and 20-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dempsey et al. ('696) in view of Parks et al. ('176) or Mackey ('553 or '528) and further in view of Gillis et al. ('107 or '939).

Dempsey et al. disclose the production of molded polyurethane products, including SRIM products, wherein an internal mold release agent comprising fatty polyesters, that correspond to applicants' claimed fatty polyester, is utilized with a polysiloxane surfactant that corresponds to applicants' claimed poly(dimethylsiloxane)-polyoxyethylene surfactant. Dempsey et al. disclose

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this surfactant as L-6980. See example 1. Dempsey et al. further teach at column 8, line 16 that surfactants corresponding to those of applicants are preferred components of the composition. It is noted that applicants have amended the EO content per 100 g of the polymer to more than 0.006 moles; accordingly, the position is taken, in view of the showings within applicants' declaration of January 25, 2007, wherein it has been established that the EO mole content of Example 1 of Dempsey et al. is as high as 0.0053, that the exemplified content is so close to the end point of that claimed, that one of ordinary skill would have reasonably expected the respective compositions to display the same properties. The logic for this position stems from the rationale set forth within the court decision, *Titanium Metals Corp. of America v. Banner*, 778 F.2d 775, 227 USPQ 773 (Fed. Cir. 1985). This position is bolstered by applicants' own Example 6, which shows that an EO content of 0.0052 moles per 100 grams of polymer yielded good mold release properties.

6. Dempsey et al. fail to disclose applicants' component c)ii), fatty acid; however, applicants' specifically claimed mold release agent comprising both a fatty polyester and a fatty acid were known to be useful internal mold release agents for RIM and SRIM polyurethane moldings at the time of invention. This position is supported by the teachings of Parks et al. and Mackey. Parks et al. disclose applicants' claimed internal mold release agent within the abstract; column 2; and column 3, lines 1-46. Mackey discloses applicants' claimed internal mold release agent within the abstract and columns 3 and 4. The references further disclose the use of surfactants. See column 7, lines 30-47 within Parks et al. See column 9, lines 18-20 within Mackey.

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7. Since it has been held that it is *prima facie* obvious to utilize a known component for its known function and in view of the teachings within Parks et al. and Mackey to utilize a fatty acid component in admixture with a fatty polyester component to produce mold release compositions for SRIM polyurethane moldings, the position is taken that it would have been obvious to incorporate the claimed fatty acid into the mold release agent composition of Dempsey et al., so as to arrive at the instant invention. In re Linder, 173 USPQ 356. In re Dial et al., 140 USPQ 244.

8. Furthermore, Gillis et al. disclose that the combination of polysiloxane surfactants with mold release agents comprising a fatty acid ester component yields a synergistic result in terms of the effectiveness of the mold release property in SRIM systems. See column 2, line 55. While Gillis et al. fail to specifically disclose applicants' claimed surfactant and mold release agent, the position is taken that, since each of the disclosed mold release agents within Dempsey et al., Parks et al., and Mackey is derived from long chain fatty compounds, the mold release agents of these references are analogous to the mold release agent of Gillis et al. to the extent that one of ordinary skill would have expected them to yield comparable release properties to that of Gillis et al. Accordingly, one would have reasonably expected that the combined use of fatty compound based release agents and polysiloxanes would yield SRIM compositions having improved mold release, relative to compositions not employing these respective components in combination. Furthermore, since mold release properties have been linked to the polysiloxane surfactant, it stands to reason that increasing the amount of the polysiloxane surfactant would be expected to improve mold release properties; therefore, it would have been obvious to increase the amount of polysiloxane surfactant utilized thereby increasing the EO content contributed by

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the surfactant. It has been established that discovering an optimum value of a result effective variable involves only routine skill in the art. In re Boesch, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

9. Applicants' arguments have been considered; however, they are insufficient to overcome the prior art rejection. Firstly, despite applicants' argument, applicants have failed to disqualify Mackey ('528) and Gillis et al. ('939) under 35 USC 103(c), because the references are available under 35 USC 102(a), as well as 35 USC 102(e). Despite applicants' argument, applicants' instantly claimed invention is not entitled to the filing date of 60/124,456, because the specification within the provisional application fails to support the instant claims under 35 USC 112, first paragraph. Secondly, the position taken above and within the Advisory Action of July 22, 2010 with respect to the relationship of the amount of surfactant to mold release properties has been maintained. For the convenience of all concerned, the position taken within the Advisory Action is reproduced as follows:

Despite applicants' remarks, the skilled artisan would have reasonably expected release characteristics to some extent be based on quantity or concentration of siloxane surfactant utilized. One would expect that greater concentration of surfactant in the polymer would result in greater concentration of the surfactant in the polymer at the mold/polymer interface, thereby affecting mold release. All of applicants' argued examples are ineffective to establish that this argued relationship is unsupported or disproved, because the argued examples neither establish nor disprove a nexus between mold release and amount of surfactant utilized. The examples vary other components (while mostly holding the content of surfactant constant); therefore, there is no way to establish the

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relationship between the number of releases and the quantity of surfactant used. In other words, there is nothing on the record to indicate that the number of releases is not based on some other variable. Definitive conclusions pertaining to the relationship between number of releases and quantity of surfactant would have to be derived from examples where all factors are held constant save for the quantity of surfactant.

Within applicants' response, applicants have simply referenced language within the examiner's remarks and argued them out of context. Taken as a whole, the examiner's remarks within the Advisory Action serve to explain why the argued examples are deficient to support applicants' position. Despite applicants' remarks, the examiner finds no deficiency with his position. Lastly, applicants' examples have again been considered; however, they are insufficient to overcome the prior art rejection, because the showings are not commensurate in scope with the claims in terms of reactant species and amounts. It has been held that the claims must be commensurate in scope with any showing of unexpected results. In *re Greenfield*, 197 USPQ 227. It has further been held that a limited showing of criticality is insufficient to support a broadly claimed range. In *re Lemin*, 161 USPQ 288. For example, each of applicants' examples employs two specific active hydrogen components, a specific polyisocyanate, water, a specific blend of catalysts, as well as specific surfactants; however, applicants' claims 1 and 22 fail to be so narrowly limited. Accordingly, applicants' examples are of insufficient scope to establish any probative showing of unexpected results for the full scope of the claims. To further support the position that showings of unexpected results must be commensurate in scope with the claims, the examiner relies upon *In re Kulling*, 897 F.2d 1147, 14 USPQ2d 1056, 1058 (Fed. Cir. 1990) and *In re Grasselli*, 713 F.2d 731, 743, 218 USPQ 769, 777 (Fed. Cir. 1983), as well as the



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guidelines within MPEP 2145. Therefore, the obviousness rejection has been maintained for the reasons set forth.

Any inquiry concerning this communication should be directed to R. Sergent at telephone number (571) 272-1079.

/Rabon Sergent/  
Primary Examiner, Art Unit 1765